

REMARKS

Claims 1 to 30 are pending, claims 11 and 27 are withdrawn from consideration, claims 1 to 10, 12 to 26, and 30 are objected to (but claims 5, 12, 14 to 25 are free of any rejections), and claims 1 to 4, 6 to 10, 13, 26, and 30 are rejected. Applicants are herein canceling claims 2, 3, 11, 13, 15, 16, 19 to 24 and 27 to 29, amending claims 1 and 5 to 7, and adding new claim 31 directed to the subject matter of claims 15, 16, 19 to 24 (which were free of art rejections). Applicants traverse the rejection, as explained more fully below.

Amendments

Applicants are herein cancelling claims 2, 3, 13, and 27 to 29, without prejudice or disclaimer. Applicants are also herein cancelling claims 15, 16, and 19 to 24 and representing their subject matter in a single, new claim 31. Applicants are herein amending claim 1 to delete non-elected subject matter, without prejudice or disclaimer. Applicants explicitly reserve the right to file one or more divisional and/or continuing applications directed to the non-elected subject matter.

Applicants submit that no new matter is introduced by the amendments to the claims.

Claim Objections

Claims 1 to 10, 12 to 26, and 30 are objected to for containing non-elected subject matter. Applicants are herein amending claim 1 to delete non-elected subject matter. Claims 4 to 10, 12, 14 to 26, and 30 depend from claim 1 and claims 2, 3, and 13 are being cancelled. Accordingly, applicants submit that the objection is rendered moot and should be withdrawn.

Double Patenting Rejection

Claims 1 to 4, 6 to 10, 13, 26, and 30 are rejected on the ground of nonstatutory obviousness-type double patenting as being allegedly unpatentable over claims 1 to 6, 32, and 42 of US-B-6,458,802 in view of Patani, *et al.*, *Chem. Rev.* **1996**, 3147-3176. Applicants traverse the rejection because the combination does not render the claimed invention obvious.

The Office indicates that US-B-6,458,802 does not disclose the use of an alkanoyl of 2 to 6 carbon atoms or an alkanesulfonyl of 1 to 6 carbon atoms at the R², R³, R⁴, or R⁵ positions corresponding to the R¹, R², and R³ of the instant claims. The Office turns to the Patani reference to supply the missing elements, reasoning that this reference allegedly teaches the bioisosteric replacement of an alkanamido with either an alkanoyl or an alkanesulfonyl and that the skilled artisan would have a reasonable expectation of success by making such a substitution.

Applicants traverse the rejection because the bioisosteric argument is technically flawed. A bioisostere is a compound resulting from the exchange of an atom or a group of atoms with another atom or a group of atoms that exhibit similar biological properties to the parent compound, based on physiochemical and/or topological similarities between the exchanged groups. Applicants submit that the Office is not comparing equivalent bioisosteres, at least for the following reasons:

- In the Patani reference, Table 41 and Figure 69 show the activity of various ketone isosteres that are *bivalent* (noting that X is a linking unit between phenyl ring and an methylheteroaryl group). The claimed invention, on the other hand, uses ketone-containing groups that are *monovalent* substitutions on heteroaryl groups. From an electronic shell perspective, the ketone isosteres of Patani would differ greatly from the ketone-containing monovalent moieties of the R¹, R², and R³ of the instant claims. In addition, the bivalent groups would greatly differing spatial requirements that their monovalent counterparts.

- Table 41 and Figure 69 show the *euglycemic activity* of various ketone isosteres, whereas the claimed compounds of the instant invention are useful in treating depression, anxiety, panic disorder, post-traumatic stress disorder, premenstrual dysphoric disorder, attention deficit disorder, obsessive compulsive disorder, social anxiety disorder, generalized anxiety disorder, obesity, eating disorders, vasomotor flushing, cocaine and alcohol addiction, and sexual dysfunction. There has been no evidence presented establishing that *euglycemic activity* is predictive of *depression and the other listed conditions*.

Accordingly, applicants respectfully submit, therefore, that the claimed invention is not obvious over US-B-6,458,802 in view of Patani and request the withdrawal of the double patenting rejection.

Conclusions

Applicants request:

- (1) entry of amendments to the claims;
- (2) reconsideration and withdrawal of the objection to the claims;
- (3) reconsideration and withdrawal of the rejection of the claims; and
- (4) allowance of claims 1, 4 to 10, 12, 14, 17, 18, 25, 26, 30, and 31.

If the Examiner is of a contrary view, the Examiner is requested to contact the undersigned attorney at (215) 568-3100.

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